DETAILED ACTION

Acknowledgement is made of applicant's amendment filed 03/03/2008.
Accordingly the application has been amended.

Response to Arguments

Applicant's arguments with respect to the rejection under USC 112, second
paragraph have been fully considered and are persuasive. The rejection has been
withdrawn.

Applicant's arguments with respect to claim 11, specifically the internal plate
branch having a free end, have been considered but are moot in view of the new
ground(s) of rejection.

Applicant's arguments with respect to the obvious rejection of claims 15, 19 and
23 are not persuasive as applicant has not presented remarks or facts germane to the
claimed subject matter, but rather has stated that the applicant's invention solves a
different problem than Haskell. This is not sufficiently persuasive for the reason stated
above as well as the fact that patentability is not determined solely on whether the
problem to be solved is the same, but rather on whether the prior art discloses the same
device or an obvious variant that is capable of performing the same function.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all
obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 11-15, 19, 22-23 are rejected under 35 U.S.C. 103(a) as being
unpatentable over Haskell (3070198).

Regarding claim 11: Haskell discloses a grid having the form of a web of
vertically disposed plates said web of plates comprising:

(a) a network of strands of plate segments (14) connected by junctions, said
strands terminating only at the periphery of the grid, and

(b) one or more internal plate branches (forming internal cells 10, 11, 31);

each plate segment being joined at one end to a junction with at least two other
plate segments and at the other end either being joined to a junction with at least two
other plate segments or terminating at or near the periphery of the grid,

said internal plate branch comprising a plate, wherein in horizontal cross-section
through the grid each segment has at least two angular portions, at least two curved
portions or at least two angular and curved portions, which portions alternate in direction
(where Haskell discloses at least two angular portions).

Haskell does not expressly disclose that the internal plate branch has a free end
within the grid but does disclose that an internal juncture of cell 31 is free, and being
joined at one end thereof to a segment or to another branch (where any of the
segments of cell 31 join another cell. Applicant has not disclosed that the plate branch
having a free end provides an advantage or solves a stated problem, but rather
discloses several embodiments of the structure that serve the intended purpose of the
invention (see figures 2, 5-7), where the embodiments of figures 5-7 do not comprise a
free end but rather are very similar in design to the structure disclosed by Haskell.

Further it is noted that it would have been obvious to add plate branches with a free end

to the structure of Haskell to provide additional structure to provide more surface area

creating smaller gaps to reduce the chance for objects to become wedged in the gaps

or for aesthetic design reasons. Moreover, it appears that the structure of Haskell and

that of applicant's invention would perform the same function of supporting an object

equally well considering applicant's own disclosure which presents grid without free

ends just as Haskell for the same purposes.

Regarding claim 12: A grid according to claim 11 wherein the alternation in

direction of the angular or curved portions is of equal magnitude or of differing

magnitude (as seen in figure 1).

Regarding claim 13: A grid according to claim 11 wherein the grid is formed from

vertical plates wherein each vertical plate has a high resistance to deformation in a

direction parallel to its vertical plane and is relatively easily deformed in the horizontal

plane (Col. 1, lines 41-41).

Regarding claims 14, 22: A grid according to claim 11 wherein the grid is free

from a solid boundary perimeter plate (as seen in figure 1).

Regarding claims 15 and 23: Haskell discloses the grid according to claims 11 or

13, but does not expressly disclose that the grid is formed from a metal. But Haskell

does disclose that the strands be formed of any relatively thin walled structure capable

of structural support, Col. 1, lines 9-10 and 40). It is notoriously common and well

known in the art to use thin gage sheet metal for expanding honeycomb structures used

for structural purposes. Therefore it would have been common to one of ordinary skill in

the art to make the grid of Haskell from sheet metal because it is easily worked with and
obtained.

Regarding claim 19: Haskell discloses the gird according to claim 16, but does
not expressly disclose that the ratio of the height of the web to the average thickness of
the vertical plates forming the; web lies in the range 100:1 to 2:1. However, this is such
a broad range and applicant has not indicated criticality, therefore it appears to be a
mere matter of obvious design choice to make the height to thickness ratio any ratio
depending on the specific application the grid is used for and to what load it will be
subject. Furthermore it is noted that it would have been Obvious to one of ordinary skill
in the art to modify the grid of Haskell to have a height/thickness ratio in the claimed
range, as the range is so large it encompasses most commonly used ranges in design
specifications.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public
use or on sale in this country, more than one year prior to the date of application for patent in the United
States.

Claims 16-18, 21 are rejected under 35 U.S.C. 102(b) as being anticipated by
B Haskell (3070198).

Regarding claims 16: Haskell discloses a grid having the form of a web of
vertically disposed interconnected plates or strips (14), said web having in horizontal
cross-section a repeating pattern (as seen in figure 1), said pattern comprising one or
more series of unit cells (31), each cell having substantially polygonal shape wherein
each polygon contains at least 8 sides, at least two internal angles above 180° (the

interior center angles of cell 31) and at least four internal angles below 180° (the top or bottom interior angles).

Regarding claim 17: A grid according to claim 16 wherein one or more linear or branched internal projections (any cell 10 or 11) is provided on one or more sides of a polygon or at the junction of two sides of a polygon, wherein the said projections do not bridge any polygon.

Regarding claim 18: A grid according to claim 16 wherein the grid is formed from vertical plates wherein each vertical plate has a high resistance to deformation in a direction parallel to its vertical plane and is relatively easily deformed in the horizontal plane (Col. 1, lines 40).

Regarding claim 21: A grid according to claim 16 wherein the geometric shape of the polygon is superimposed on itself when rotated in the horizontal plane through 180° (as seen in the drawing).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessica Laux whose telephone number is 571-272-8228. The examiner can normally be reached on Monday thru Thursday, 9:00am to 5:00pm (est).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Chilcot can be reached on 571-272-6777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeanette E Chapman/
Primary Examiner, Art Unit 3633

/J. L./
Examiner, Art Unit 3635